PROXEMIC DETERMINANTS OF PERCEIVED COMMUNICATOR CHARACTERISTICS AND ATTITUDE CHANGE

BY

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Previous research has shown that the status and attractiveness of a communicator are related to the persuasiveness of that communicator and are affected by the nonverbal spatial behavior engaged in by the communicator. Several integrative hypotheses relating these variables were proposed and tested in the present study. Specifically, it was hypothesized that if the attractiveness of the communicator is more salient than his or her status, decreased distances and angles of orientation adopted by the communicator should lead the audience to perceive him or her as more attractive (e.g., sociable, friendly, pleasant). In addition, those proxemic cues which convey communicator attractiveness should also lead the audience to perceive the communicator as more persuasive and to change their attitudes toward the position advocated by the communicator. When the communicator's status rather than attractiveness is the more salient dimension, then increases in the distance and angle of orientation adopted by the speaker should lead to increased ratings of the communicator's status. These perceptions of higher status should also lead to higher persuasiveness ratings and more attitude change. Additionally,

changes in ratings of a communicator's expertise resulting from variations in proxemic behavior should be reflected in persuasiveness ratings and attitude change.

In order to test these hypotheses, 235 male and female subjects listened to a three minute speech arguing against the use of seat belts. Subjects (a) either were the direct target of the speaker or observed and listened to the speaker deliver the speech to someone else, and (b) were instructed to focus on either the attractiveness or status of the speaker. In addition, the speaker adopted (c) one of three distances (3, 5, or 7 feet) and (d) one of three angles of orientation (0, 20, or 40 degrees) away from the target-listener.

Subjects' ratings of the speaker after listening to the speech indicated that the proxemic cues of distance and orientation did not affect perceptions of attractiveness, status, or persuasiveness in the hypothesized manner. In fact, these cues had no effect on attractiveness and status ratings. However, orientation was related to perceptions of expertise such that speakers who adopted a greater (i.e., more direct) angle of orientation were rated as more expert (e.g., proficient). In addition, the speakers' angle of orientation was directly related to attitude change induced. Subjects listening to a speaker who adopted an indirect orientation became less favorable toward seat belts. This effect occurred for both target and observer subjects.

These data suggest that communicator expertise, rather than attractiveness or status, might be the important characteristic linking a speaker's proxemic behavior to his or her ability to change the attitudes of an audience.

CHAPTER I
INTRODUCTION

During interpersonal interaction individuals adopt various angles of orientation and interpersonal distances vis-a-vis one another. Several investigators (e.g., Argyle and Kendon, 1967; Hall, 1963; 1966; Mehrabian, 1972) have proposed that these proxemic (i.e., spatial) cues convey information concerning the relationships among interactants, and the results of a considerable amount of research bear on this subject. Based on an extensive review and integration of this literature, Riess (Note 1) has posited several hypotheses concerning how information related to various dimensions of interpersonal relationships is communicated by proxemic cues. The present experiment is designed to test several of these hypotheses; specifically those concerning attractiveness, status, expertise, and persuasiveness. These hypotheses will be explained in the introduction. Then the experiment itself--including design, methodology, and data analysis--will be described. Next, the results will be considered and their implications for the hypotheses will be discussed.

Distance, Orientation, Attractiveness, and Status

Reviews of the proxemic literature (e.g., Mehrabian, 1969; 1972; Riess, Note 1) indicate that both direct angles of orientation and decreasing interpersonal distances are related to increased liking, attraction, or positiveness of attitude between two people. Consequently, as the angle of orientation adopted by a speaker relative to an addressee decreases

(i.e., the orientation becomes more direct), the attractiveness conveyed by the speaker toward the addressee should also increase. Similarly, as the distance from the addressee adopted by the speaker decreases, the attractiveness of the speaker as conveyed to the target should increase, at least up to the point where the distance is so close that the addressee feels uncomfortable, perhaps because his or her personal space (Sommer, 1969) was violated.

The proxemic cues of distance and orientation have also been found to be related to status (Mehrabian, 1969; Sommer, 1967). Generally, increasing distance and greater angles of orientation are associated with greater status differentials because the higher status person adopts a farther distance and less direct orientation vis-a-vis the lower status person.

Literature Review

Experiments investigating these relationships between proxemic cues (specifically distance and orientation) and attractiveness and status will be reviewed here to illustrate the various types of work upon which the relationships proposed emerged.

Orientation, distance, and attraction. In one of the earliest studies of proxemic cues, James (1932) had subjects rate photographs depicting a masked male stimulus person who adopted a wide variety of combinations of proxemic cues. Results indicated that indirect angles of body orientation (i.e., turning away) communicated a negative attitude to the raters. Mehrabian (1967) found comparable results using live stimuli. In his study female subjects interacted for three minutes with a female experimenter who controlled the angle of orientation of her head and body. After the session subjects rated the experimenter's attraction

(positive or negative attitude) toward them. More positive attitudes were attributed to the experimenter when her head orientation was direct (i.e., facing toward the subject) rather than indirect (i.e., facing away from the subject). In addition, when head orientation was direct, more positive attraction was inferred when the experimenter's body orientation was direct rather than indirect. In another decoding study, Machotka (1965) had subjects rate line drawings and found that directness of body orientation conveyed varying degrees of liking.

In contrast to this work on information decoded from orientation cues, much of the work on the relationship between attractiveness and angle of orientation encoded has been done by Mehrabian and his colleagues. Mehrabian introduced the concept of immediacy to characterize nonverbal cues. Proxemic cues included in the immediacy dimension are interpersonal distance and angle of orientation, with more direct angles of orientation and smaller interpersonal distances corresponding to increased immediacy (Mehrabian, 1967). In a series of studies Mehrabian has had subjects encode nonverbal cues while role-playing or actually engaging in interactions with other people. Analyses of composite measures of immediacy encoded in these studies (reported by Mehrabian, 1972) provide information concerning the relationship between attractiveness and proxemic cues.

In one of a series of experiments reported by Mehrabian (1968a) subjects were asked to imagine that they were interacting with various other people and to stand in the ways that they would if the interaction was actually taking place. Analysis of variance on the immediacy measure indicated that these standing communicators were more immediate with imagined addressees they liked rather than disliked. A similar effect

was found by Mehrabian and Friar (1969) for seated communicators. These communicators adopted a more immediate position vis-a-vis a liked versus a disliked imagined addressee. Finally, Mehrabian (1968b) found the same relationship across a wider range of liking. Subjects in this experiment were asked to imagine that they were interacting with someone and to sit as they would in that interaction. The imagined sex of this other person and the subject's attitude toward him or her were manipulated. Subjects imagined that they (a) liked intensely, (b) liked moderately, (c) neither liked nor disliked, (d) disliked moderately, or (e) disliked intensely the person with whom they were interacting. A composite measure of immediacy, taken after subjects had assumed the seated position they felt was appropriate, was a direct linear function of imagined positive attitude toward the addressee.

This series of encoding studies by Mehrabian and his associates employing the concept of immediacy indicates that more immediate nonverbal behaviors (i.e., smaller distances and more direct angles of orientation) are associated with increased attraction between the interactants. Several other studies also found this relationship. In a decoding study, Imada and Hakel (1977) investigated the effects of the immediacy of nonverbal behaviors engaged in by an interviewee on the perceptions of this interviewee made by the interviewer and observers of the situation. Degree of immediacy was manipulated by varying eye contact, interpersonal distance, body orientation, posture, and smiling. Immediate interviewees were rates as better liked, as having more desirable characteristics, and as warmer than nonimmediate interviewees.

Several other studies have found relationships between attraction and distance. In one such study, Russo (1966) investigated the connotations of seating arrangements depicted on drawings which varied in the distance between interactants afforded by the arrangement. Results indicated that the degree of friendliness conveyed to raters between interactants of particular arrangements decreased as the distance between the interactants increased.

Using an actual interaction setting, Wissmiller and Merker (1976) found similar results. Groups of four subjects participated together in discussion groups seated around square tables which afforded either five or ten feet between each of the participants. After interacting for 20 minutes each participant rated the other members of his group on an interpersonal judgment scale. Results indicated that participants sitting closer to one another were rated as more sociable, higher on both social and task attraction, and as more similar than were participants sitting farther from one another.

A decoding study reported by Mehrabian (1968a) also found that closer interpersonal distances communicated more positive attitudes than farther distances. In this study subjects judged the communicative significance of 3 x 5 photographs of persons who varied their proxemic cues. Subjects were told to imagine that they were talking to the person in the picture and then rated how much they thought the person in the picture liked or disliked them. Results indicated that the subjects thought a person four feet away in the picture liked them more than a person 12 feet away.

In a decoding study which employed an interview setting, Patterson and Sechrest (1970) found that between four and eight feet there was an

inverse relationship between distance and ratings of friendliness. As the interviewee adopted distances closer to the subject, ratings of his friendliness increased. There was a decrease in ratings of attractiveness at two feet, however. This may have been seen by subjects as a personal space invasion. At such close distances the hypothesized inverse relationship between distance and attractiveness is not hypothesized to hold, as will be discussed later.

Little (1965, 1968) used a novel encoding methodology to investigate the effects of attraction and familiarity on interpersonal distance. The earlier study, which used line drawings, silhouettes, and live actresses, indicated that closer distances were selected to indicate more positive attraction. In the second study, Little found that subjects placed stick figure dolls at closer distances to depict interactions among friends rather than acquaintances. In addition, acquaintances were depicted as interacting at closer distances than strangers.

Thus, a considerable amount of research employing both decoding and encoding methodologies indicates that decreased distances and more direct angles of orientation are associated with increased attraction among interactants. These two proxemic cues have also been found to be related to the status relationships among interactants. Research investigating these relationships will now be reviewed.

Orientation, distance, and status. A series of studies by Lott and Sommer (1967) indicated that increasing status differentials between interactants are associated with increased interpersonal distance and direct angles of orientation. In several studies in this series subjects were shown diagrams of seating arrangements, such as rectangular or square tables, and were asked where they and another person would sit in these

arrangements. The status of this other person was manipulated such that it was higher than, lower than, or equal to that of the subject. The final study in this series was similar to the others except that actual tables rather than diagrams were employed. Results from all the studies in this series were consistent in indicating that as the status differential between the interactants increased, so did the interpersonal distance and indirectness of orientation between them afforded by the seating locations chosen.

In her study of the connotations of seating arrangements, Russo (1966) also had subjects rate the various arrangements in terms of the status between the interactants conveyed. Arrangements with farther distances between the interactants conveyed greater status differentials to the subject-raters than did arrangements with closer distances between interactants.

In several other studies related to status subjects have encoded rather than decoded proxemic cues. In the Mehrabian and Friar (1969) study mentioned earlier, the imagined status and sex of the interactant were also manipulated. Subjects imagined that they were interacting with a male or female who was higher, lower, or equal status relative to themselves. Distances adopted by subjects vis-a-vis addressees who were either higher or lower status were greater than distances to peers. In addition, subjects encoded more indirect angles of head, shoulder, and leg orientation vis-a-vis opposite sex as compared to same sex addressees. Because there is often a greater status differential between members of opposite sex as compared to same sex dyads (Deaux, 1976), these results are consistent with Lott and Sommer's findings that greater status differentials are associated with more indirect orientations.

If it is assumed that subjects in experiments perceive a status differential between themselves and experimenters, then results of several other studies may be taken as support for the direct relationship between interpersonal distance and status differential. In the context of a small group discussion, Giesen and McClaron (1973) found that subjects sat closer to other subjects than to the experimenter. In a similar study by Hendrick et al. (1974) subjects in three person discussion groups with a moderator were told to sit anywhere in a room. Subjects sat closer to each other than to the moderator. A second study was conducted by Hendrick et al. to investigate the possibility that conformity rather than relative status determined the seating distances. The procedure was basically the same as in the first study but this time one of the group members was actually a confederate who sat down first and either took a position close to (42 inches) or far from (132 inches) the moderator. Results indicated that subjects did not simply conform to the distance from the moderator adopted by the confederate. Instead, the results of the first study were replicated. Distances between the subjects and the moderator were larger than distances between subjects, regardless of the position adopted by the confederate.

Hence, distance and orientation convey information concerning both status and attraction. Generally, decreased distances and more direct angles of orientation are associated with increased attraction and smaller status differentials. Whether these cues communicate information related to attraction or status might depend on which characteristic is salient, conspicuous or noticeable to the audience. Thus, the first major set of hypotheses to be tested in the present experiment can be stated as follows.

If the attractiveness of a communicator is more salient to the audience than the communicator's status, then decreasing distance and/or angle of orientation should be decoded as indicating increased communicator attractiveness. These cues should have little effect on the audiences' perceptions of the communicator's status. On the other hand, when status is more salient than attractiveness, increased interpersonal distance and greater angles of orientation adopted by the communicator should indicate increased communicator status to the audience. These proxemic cues should have little effect on perceived attractiveness when communicator status is the salient dimension in the situation.

The above hypotheses are based upon the assumption that attractiveness and status are independent dimensions. This assumption is based upon a large number of studies of the dimensions of interpersonal relations (reviewed by Riess, Note 1). These studies, which have employed factor analysis, multidimensional scaling, and cluster analysis, indicate that attractiveness and status consistently emerge as orthogonal (i.e., independent) dimensions.

Perceived Persuasiveness and Attitude Change

The attractiveness and status of a communicator are also directly related to his or her persuasiveness and ability to induce attitude change (cf. Hovland et al., 1953; Mehrabian, 1969; Tedeschi et al., 1973). Communicators who are perceived by their audience as more attractive and of higher status are more persuasive than those lower in attractiveness and status.

A number of investigators have considered the relationship between the attractiveness of a communicator and attitude change induced by that

communicator. In summing up relevant theory, Tedeschi et al. (1973, p. 68) have stated that "almost all social-psychological theories of interpersonal attraction predict that the source's attractiveness will enhance the efficacy of his persuasive communications." In their theory of social influence they propose that source attractiveness should be directly related to a target's compliance because the target will tend to assume that the attractive source is making accurate statements. One reason this occurs is that targets believe that liked sources have goals similar to their own. In addition, people are more susceptible to persuasive communications from speakers whom they perceive as liking them because they tend to assume that others who like them probably care about their welfare and would only try to influence them toward positions which would be beneficial (Mills, 1966; Rosnow and Robinson, 1967).

Several studies obtained results that are consistent with the prediction that attractive sources are more persuasive than unattractive ones. In one classic experiment that is often cited, Mills and Aronson (1965) found that a female communicator who was made to appear physically attractive was more effective in influencing a male audience when she made her intent to influence clear. When this same female was made physically unattractive her expressed intent did not affect the audience.

The status of a communicator is presumed to be directly related to his or her persuasiveness because targets feel obligated to comply with the requests or suggestions of high status persons. Thus, high status constitutes legitimate power in French and Raven's (1959) classification of the bases of power. In one of the classic studies in this area, Torrance (1954) had groups of three people solve ambiguous problems. These groups

were composed of air force crews which had a definite status hierarchy. In these crews the pilot had the highest status, the navigator was in the middle of the status hierarchy, and the gunner had the lowest status of the three. The groups had to reach unanimous decisions on the problem. Suggestions made by the high status pilot were accepted more often than those of either the navigator or the gunner. This even occurred when the pilot's suggestion were often incorrect. In addition, the suggestions of the middle status navigator were accepted more often than those of the low status gunner.

Combining the findings concerning the relationships between proxemic cues and perceptions of communicator attractiveness and status with those concerning the relationship between communicator characteristics and persuasion, the following hypotheses can be proposed. Proxemic cues that increase a communicator's attractiveness (i.e., decreased distance and/or orientation when attractiveness is salient to the audience) should lead the audience to (a) rate the communicator as more persuasive, and (b) change their attitudes to become more favorable toward the position advocated by the speaker. Similarly, proxemic cues which convey high status (i.e., increased distance and angle of orientation when communicator status is salient to the audience) should also lead to increased perceived persuasiveness and corresponding attitude change.

The several studies that have investigated the relationships between proxemic cues and persuasion have been largely exploratory in nature. Armed with the concept of immediacy, Mehrabian and Williams (1969) expected that more immediate proxemic cues should be directly related to both intended persuasiveness of encoders and perceived persuasiveness by decoders. Albert and Dabbs (1970) couched a post hoc explanation of

their unexpected results in terms of reactance theory. The integrating hypotheses proposed above provide reinterpretations of the results of both these studies. First the series of experiments reported by Mehrabian and Williams will be considered.

In one experiment which employed a decoding methodology, subjects were shown video-tapes of communicators and rated the persuasiveness of these communicators. In a factorial design, the orientation, distance, and sex of the communicators were varied along with several other non-verbal cues. Results indicated that the sex of the communicators interacted with the angle of orientation they adopted in affecting perceived persuasiveness. [Male communicators were perceived as more persuasive when they adopted an indirect rather than a direct angle of shoulder orientation toward the addressee. For female communicators, however, orientation did not affect persuasiveness.

In this situation, in which the subject-raters watched a persuasive communication from someone they did not know, it may be reasonable to assume that the communicator's status (or perhaps expertise) was more salient than the communicator's attractiveness, especially when the communicator was male. Consequently, indirect orientations which should have increased perceptions of the communicator's status, should have also increased his perceived persuasiveness. If we assume that status considerations may have been less salient when the communicator was female, this might explain the failure to find any effects of orientation on persuasiveness when the communicator was female.

The other two experiments reported by Mehrabian and Williams (1969) employed encoding methodologies. In one of these studies subjects were

instructed to encode communications concerning candidates in an upcoming election. The communications were rated for various measures of nonverbal and verbal behaviors as well as for perceived persuasiveness. Factor analysis of these dependent measures revealed that angle of orientation loaded on a perceived persuasiveness factor along with several other measures of the persuasiveness of the communicators. Less direct angles of orientation were associated with greater perceived persuasiveness. This effect can be explained by assuming that the issue used in this study (i.e., candidates for political election) made communicators' status more salient than attractiveness. Therefore, more indirect angles of orientation may have made encoder-subjects appear higher in status and hence, more persuasive.

In the other encoding experiment subjects were instructed to deliver communications with high, moderate, or no persuasive intent such that this intent was probably obvious, probably not obvious, or not present, respectively. The communications that were encoded under these different instructions were analyzed for differences in nonverbal behaviors and persuasive quality. This analysis revealed that the proxemic cues of distance and angle of orientation were not significantly affected by the manipulation of intended persuasiveness. According to the present analysis, persuasiveness is hypothesized to be related to higher status (increased distance and more indirect orientation) and higher attractiveness (decreased distance and more direct orientation) of the speaker. Consequently, these two communicator characteristics might have canceled each other out, resulting in no overall relationship between intended persuasiveness and the proxemic cues adopted. If either attractiveness

or status is made salient to the subjects, then perhaps the hypothesized relationships would obtain.

Another experiment investigating the relationship between proxemic cues and persuasion can also be interpreted in terms of the hypotheses proposed here. In this experiment conducted by Albert and Dabbs (1970), a speaker delivered a persuasive communication to a target-subject seated either 1-2, 4-5, or 14-15 feet away. Attitude change measures indicated that persuasion increased linearly with increasing distance. As the distance adopted by the speaker relative to the target increased, targets' attitudes became more in line with the position adopted in the communication. If it is assumed that status is an important characteristic upon which listeners rate speakers in such persuasive communication situations, then an interpretation becomes apparent. Increasing interpersonal distances adopted by the speaker indicated greater speaker status to the targets; targets who perceived the speaker as having higher status changed their attitudes toward the position he advocated. These post hoc interpretations of the results obtained by Albert and Dabbs (1970) and by Mehrabian and Williams (1969) will be directly tested in the present experiment.

Communicator Expertise

Although the expertise of a communicator is also directly related to persuasiveness (cf. Hovland et al., 1953) the effects of proxemic cues on perceptions of expertise have rarely been investigated. Because status and expertise often covary (Tedeschi et al., 1973) it is possible that those proxemic cues which convey high status might also convey expertise.

In fact, communicators' expertise rather than status might mediate the relationship between proxemic cues and persuasiveness in many situations. Nevertheless, if these or other distance or orientation behaviors do convey increased communicator expertise, they should also lead to increased persuasiveness ratings and attitude change. To investigate possible relationships between a speaker's distance and orientation behaviors and perceived expertise, several items assessing the expertise of the speaker, in addition to those assessing attractiveness, status, and persuasiveness, were included in this experiment.

A recently proposed theory by Burgoon and Jones (in press) does make predictions concerning the relationship between interpersonal distance and persuasiveness. This theory, which is based on the communicative significance of violations of proxemic expections, predicts that "individuals perceived as rewarding sources (attractive and/or high status) will be more persuasive when they maintain a distance closer than the norm than when they maintain the normative distance or a greater distance." (p. 22) An initial test of this theory by Burgoon (1976) is generally supportive of it.

It would be constructive at this point to draw attention to several differences between the present approach and the one proposed by Burgoon and Jones. First, they hold that a proxemic act must violate expectations in order to have communicative significance. In the present approach it is suggested that certain proxemic acts have associated with them particular meanings. In interpersonal interactions individuals probably do hold expections concerning the distancing behaviors of others. These expectations probably are for a range of distances. Within this range, various

distances can be perceived by individuals as conveying different information about the actor even though they do not violate expectations.

Second, Burgoon and Jones seem to infer that individuals establish the degree of rewardingness of the source based on information other than distance, and that distance then affects persuasiveness depending on these perceptions of rewardingness. In the present approach, proxemic cues are presumed to affect perceptions of the speaker's characteristics which in turn affect his or her persuasiveness.

Listener's Perspective

The effects of a speaker's proxemic behavior on his or her perceived characteristics might vary depending upon whether the listener is the direct target of the speaker (i.e., the addressee), or a third person who observes and listens to the speaker deliver the persuasive communication to someone else. Work on attribution processes is relevant here and provides a basis for making predictions concerning differences in perceptions associated with differences in the listener's perspective vis-a-vis the speaker.

Jones and Davis (1965) identified several variables which affect the probability that an observer will attribute an actor's behavior to dispositional characteristics. Among these variables are hodonic relevance and personalism. Hedonic relevance refers to the degree to which the actor's behavior is rewarding or punishing to the attributor. A personalistic act is one which the attributor believes is directly influenced by his presence.

The target of a speech is more directly affected by the speaker's behaviors and is more likely to infer that these behaviors are directed

specifically at him or her than is an observer of the speech who is not being addressed directly. Consequently, hedonic relevance and personalism are higher for the direct target of the speech than for the observer. Jones and Davis hypothesize that dispositional attributions become more likely as hedonic relevance and personalism increase. Thus, as compared to observers, direct targets of a speech should be more likely to attribute the speaker's nonverbal behaviors to his or her internal dispositions (characteristics) such as attractiveness, status, and expertise. This would lead to the prediction that the nonverbal behaviors engaged in by a communicator should have greater effects on the perceptions of the communicator made by direct targets of the communication than those made by observers who are not specifically addressed.

A recent study by Imada and Hakel (1977), published after the present experiment was designed and conducted, also investigated the effects of perspective on the perceptions of nonverbal behaviors. The situation in this study was a simulated job interview. A job applicant (actually a confederate) was interviewed by one subject while two other subjects watched the proceedings. The interviewer was seated directly across a table from the applicant-confederate. One of the observers was located in the interview room next to the interviewer and the other watched the interview through a closed circuit T.V. system. The camera for this system was located directly behind the interviewer. During the interview, the applicant was either immediate or nonimmediate in his nonverbal behaviors (i.e., interpersonal distance, eye contact, body orientation, posture, smiling).

Ratings of the applicant after the interview were not significantly affected by the perspective manipulation. However, these data did not

affect the hypotheses proposed in the present experiment because the author was not aware of them at the time they were formulated. Imada and Hadel's research was exploratory in nature and specific hypotheses concerning the perspective effects were not proposed. The present experiment provided a direct test of perspective hypotheses which were derived from attribution theory and employed a different situation from that used by Imada and Hakel.

Thus, the present experiment was a factorial design employing two levels of perspective (target-subjects and observer-subjects), two levels of focus (subjects focused on either the status or attractiveness of the speaker), three levels of distance to the target adopted by the speaker (3, 5, or 7 feet), and three levels of angle of orientation away from the target adopted by the speaker (0, 20, or 40 degrees). The distances were chosen so as not to invade the listeners' personal space at the closer distance, and not constitute a negative violation at the farthest distance. Thus, the distances selected fell within Hall's (1966) social-consultative zone.

This social-consultative zone is one of four spatial zones identified by Hall. This zone is the one in which most impersonal interactions occur. It ranges from about three (toe-to-toe) to four (eye-to-eye) feet on the close end to about 12 feet on the distant end. It is bordered by the personal zone (less than 3 feet) and the public zone (greater than 12 feet). Interpersonal distances within the social-consultative zone are appropriate in our culture for formal situations such as one in which a persuasive communication is delivered. If the speaker was to adopt a distance within the personal zone in such a situation it might be perceived as a personal space invasion by the target. In addition, if the speaker

were to adopt a distance in the public zone, it might be perceived as a negative violation. Both of these perceptions on the part of the addressee would alter their interpretations of the speaker's proxemic behavior. Consequently, the hypothesized relationships between the proxemic cues and perceptions of communicator characteristics should only occur within the social-consultative zone. This zone thereby sets the boundary conditions for these hypotheses.

Hypotheses

The hypotheses tested in the present experiment can be stated as follows.

1. If the attractiveness of a source is most salient to the audience, then decreasing distances (within the social-consultative zone) and more direct angles of orientation adopted by the speaker relative to the addressee should be perceived as indicating more attractiveness by the audience.
2. If the status of the source is most salient, then increasing distances (within the social-consultative zone) and more indirect angles of orientation adopted by the speaker vis-a-vis the addressee should convey higher speaker status to the audience.
3. Those proxemic behaviors that increase perceptions of source attractiveness and status should also lead to increased perceptions of persuasiveness and more attitude change toward the position espoused by the source.
4. Any proxemic cues which convey increased source expertise should also lead to more attitude change toward the position espoused by the source.

5. The proxemic cues engaged in by a source should have greater effects on the perceptions made by a direct target of the communication than on observers of the communication who are not directly addressed.

CHAPTER II
METHOD

Overview and Design

A decoding methodology was employed to investigate the effects of a communicator's angle of orientation and distance from an addressee on several communicator characteristics perceived by addressees and observers of the situation for whom either attractiveness or status of the communicator is made salient. In a 2 (perspective) x 2 (focus) x 3 (angle of orientation) x 3 (distance) x 2 (subject sex) factorial design, target- and observer-subjects were told to focus on either the communicator's attractiveness or status while she delivered a prepared speech. During this speech, the communicator adopted one of three angles of orientation and one of three distances vis-a-vis the target-subject, while the observer-subject watched the situation from a position off to the side of the room. Following the speech both target-subjects and observer-subjects rated the speaker on measures of persuasiveness, attractiveness, status, and expertise. In addition they rated the object of the speech (i.e., seat belts), their own feelings while viewing the speech, and several other nonverbal behaviors of the speaker.

Subjects and Experimenters

Undergraduate students in psychology and speech courses at the University of Florida were run in same sex groups of two; one was randomly assigned to be the target, the other was the observer. All subjects were

run by a male experimenter and one of two female communicators (balanced across conditions). The experimenter was a graduate student in psychology and the two communicators were both undergraduate psychology majors recruited from social psychology classes. Both communicators wore the same size clothes. Thus, it was possible for them to both wear exactly the same dress every time they delivered the speech. This dress was cleaned once a week.

The mean ratings of the communicators by subjects in this experiment on seven-point scales with endpoints labeled unfriendly--friendly, dislikable--likable, unpleasant--pleasant, cold--warm, unsociable--sociable, and unattractive--attractive were 3.5, 4.1, 4.0, 3.0, 3.3 and 5.1, respectively. The only significant difference between the two communicators on these items was on the one labeled unattractive--attractive (ratings of 4.8 versus 5.3). A total of 239 subjects were run. However, four were excluded from the analysis: two, because they did not understand English, and two because the speaker caught her ring on her dress during the speech and laughed.

Procedure and Script

When the two subjects arrived at the laboratory, they were seated and given instruction booklets as the experimenter said:

> The instructions for and purposes of this experiment are explained in these booklets. Please read them very carefully now. I will answer any questions after you have both finished reading the booklets.

The focus and perspective manipulations were contained in these booklets. In each session one subject received a target booklet and one received an observer booklet. Within these conditions the status focus and

attractiveness focus were randomly assigned. The contents of the booklets follow.

Instructions and Description
Persuasiveness Experiment

The experiment you will be participating in today is investigating various factors which might affect the persuasiveness of oral presentations and speeches. Previous research has shown that two variables which may influence the persuasiveness of a speaker are his or her attractiveness and status. ATTRACTIVENESS refers to the degree to which the speaker possesses qualities that lead the listeners to like him or her. For example, a friendly and sociable speaker would be higher in attractiveness than an unfriendly and unsociable one. STATUS refers to the psychological standing, rank, position, or place of the speaker relative to the listeners. For example, the president of a fraternity or sorority is higher in the status hierarchy of their organization than other members.

We want to determine the ways in which the status and attractiveness of speakers affect how persuasive they are perceived to be. In order to do this we are having various speakers deliver speeches to a large number of people and are having these people rate the speakers after carefully viewing the speech. In a little while a speaker will come into this room and deliver a short speech which you are to watch and listen to carefully. After viewing the speech, you will rate the speaker on several measures.

Since we are particularly concerned with attractiveness and status, we are having listeners attend to one or the other of these speaker characteristics. While viewing the speaker we want you to be particularly

concerned with the aspect of the speaker checked below. Primarily attend to this characteristic of the speaker. However, also try to keep the characteristic of the speaker that is not checked in the back of your mind.

[ ] Attractiveness

Remember, attractiveness refers to the degree to which the speaker possesses qualities that lead the listeners to like him or her.

[ ] Status.

Remember, status refers to the psychological standing, rank, position, or place of the speaker relative to the listeners.

In this study we are also interested in another factor which might influence persuasiveness. People who listen to a speaker can be divided into two groups: those who the speaker is directly addressing and the third parties or outsiders who view the speaker delivering the speech to another person. As an illustration of this distinction consider the following situations. In the first a speaker is delivering a speech directly to you. In this case you are the target of the speech. In another situation the speaker is delivering a speech to someone else and you are not part of the interaction, although you can view it. In this case you are a nonparticipating observer. This factor--whether the listener is the direct target of the speech or an observer who sees and hears the speech being delivered to someone else--might affect the listeners' perceptions of the speaker. Some theorists have suggested that it will, whereas others have suggested that it will not.

In order to investigate this, some of the listeners in the present study will be the direct target of the speech, whereas others will observe the speaker deliver the speech to someone else. You personally will assume the listener position checked below.

[ ] direct target of the speech

[ ] observer of the speech being delivered to someone else.

After you have viewed the speech from one of these two positions while carefully attending to the characteristic of the speaker checked above (either attractiveness or status) you will rate the speaker on a series of measures.

Please be sure you have read these instructions carefully and understand them completely. Then read the informed consent form attached and sign it if you agree to participate.

Procedures and Script
continued

Checks appeared at the appropriate places in the instruction booklets in order to accomplish the focus and addressee-observer manipulations. The speaker was blind to the level of the focus variable assigned to each subject.

When both subjects completed reading the instructions and signed the informed consent form the experimenter said:

> Now I will place you in the appropriate places and then I will call the speaker in. Which role were you assigned--target or observer?

After finding out which role each subject was assigned, the experimenter escorted them to appropriate seats. The target subject sat in a chair placed against the back wall of the room at the middle of the wall. The

observer-subject sat off to one side against the side wall on the target's left, at a position one foot closer to the front of the room than the target-subject. When the subjects assumed their appropriate places the experimenter continued:

> The speaker should be waiting in the next room. I will now have her come in and deliver the speech. Please watch and listen to it carefully while remembering the particular characteristic of the speaker you should primarily attend to. For the sake of experimental control I will not be in the room during the speech delivery and the speaker will not say anything to you other than the speech. She will come in here, take a seat, deliver the speech, and then leave. At the point I will return and have you fill out some questionnaires.

The experimenter then left the room and the communicator entered through a door located on the wall opposite the one that the target subject sat against. She took a swivel chair from its resting position against a wall, placed it at a particular distance from the target-subject, directly in front of him or her, sat down, assumed a particular angle of body orientation vis-a-vis the target, and commenced the speech delivery. Inconspicuous markings on the walls and floor were used by the speakers in order to set the distance and orientation. The toe-to-toe distance between the speaker and target-subject was set at either 3, 5, or 7 feet and the angles of body orientation took values of either 0, 20, or 40 degrees; where 0 degrees indicates that the speaker is directly facing the target-subject. In the indirect orientation conditions (i.e., 20 and 40 degrees) the speaker's body faced away from the observer-subject, who was positioned farther into the back of the room than the speaker, on her right. The experimenter was blind to the levels of the distance and orientation manipulations.

During the speech delivery the speaker controlled the direction of her gaze so that this nonverbal behavior was not confounded with orientation. In all three orientation conditions the speaker looked directly at the face of the target while delivering the speech except on ten occasions when she looked down at the written speech in her lap for two second intervals in order to prevent the perception that she was staring. She accomplished this by turning her head toward the target in the indirect body orientation conditions. Thus, head orientation was direct in all three body orientation conditions. Parenthetically, it should be mentioned that during practice sessions this combination of head orientation, body orientation, and gaze felt natural to the communicators and looked natural and appropriate to observers.

Communicators adopted a natural, professional appearing posture while delivering the speech. This included sitting straight in the chair with feet flat on the floor and hands and feet positioned symetrically. Results of Mehrabian and Williams' (1969) study indicate that this is a socially appropriate posture for females who are communicating with people they do not know.

The speech delivery in all sessions was as identical as possible in all verbal and nonverbal respects except distance and orientation. The two communicators extensively rehearsed until they could deliver the speech in the same way each time in a manner similar to each other. All verbal and nonverbal behaviors were controlled by the communicators to prevent any systematic differences across sessions other than distance and orientation. A series of pilot sessions were run during which time four of each communicators' speeches were recorded through a hidden microphone. These

recordings were then rated on all the dependent variables which appear in Appendix B except the eye contact item by 39 students in upper division undergraduate classes. Analyses of variance on these items treating the speeches as the independent variable indicated that there were no significant differences (p's $\geq .6$) on subjects' ratings of the speeches.

The verbal content of the speech was concerned with the possible dangers of wearing seatbelts. It was written by a subject in a previous study and was consistently evaluated as moderate in persuasiveness (M = 3.04; SD = 0.63) on a five-point scale with endpoints labeled not at all persuasive and extremely persuasive by 12 raters from a social psychology class. The script of the speech appears in Appendix A. It was memorized by the communicators so that they could deliver it verbatim at exactly the same rate each time. The speech itself took three minutes to deliver.

To insure that verbal and vocalic cues did not systematically differ across levels of the orientation and distance manipulations, six speeches made by each communicator during randomly selected experimental sessions were recorded through a hidden microphone without the speakers' knowledge. These speeches were played to and rated on the dependent measures described subsequently (except eye contact) by 43 subjects from a social psychology class. Mean ratings of the speeches were compared to determine if any systematic variation occurred. No significant effects were found (p's $> .3$).

In each experimental session, after the communicator delivered her speech she immediately left the room and the experimenter returned. At this point he handed out the dependent measures while saying:

> Now I want you to rate the speaker you just saw on this questionnaire. Please read the instructions very carefully before beginning and be sure to answer each and every question.

A copy of this questionnaire appears in Appendix B. It contains 40 seven-point bipolar adjective scales which assess speaker persuasiveness (items one through four), attractiveness (items five through ten), status (items 11 through 16), and expertise (items 17 through 22). In addition, items 23 through 28 assessed subjects' perceptions of several aspects of the speaker's non-proxemic nonverbal behavior and items 29 through 34 were included to determine if subjects' self-reports of their states while viewing the speech were affected by the independent variables. Finally, the last six items assessed subjects' attitudes toward the object discussed in the speech, that is, seat belts. Within each of these seven groupings half the items are negatively worded (i.e., the negatively valued adjective appears on the right rather than the left).

After the subjects completed the questionnaires the experimenter orally delivered a check on the focus manipulation, as follows:

> Now please turn over your questionnaire and answer the following question.
>
> While viewing the speech which characteristic of the speaker were you instructed to primarily focus on, attractiveness or status?

All subjects correctly reported the speaker characteristic to which they were assigned to attend. Since the distance, orientation, and perspective manipulations are so straight-forward no manipulation checks on these were included. This allowed for a purer probe for suspicion or awareness of the true purposes of the experiment during the debriefing.

After the focus manipulation check was delivered, subjects were probed for awareness of the true purposes of the experiment, suspicions and demand awareness were assessed, the experiment was explained, subjects were sworn to secrecy, thanked for their time, and dismissed.

When ititially asked what specific behaviors might have been investigated, 10 subjects mentioned eye contact. This was the only nonverbal behavior that was consistently specified at this point. Subjects were then told that the experiment was specifically concerned with nonverbal behaviors and were asked what nonverbal behaviors we might be investigating. At this point five subjects mentioned distance (three in the three feet condition, one in the five feet condition, and one in the seven feet condition) and 2 mentioned "the way the speaker sat facing toward the side" (both in the 40 degree orientation condition). These were the only subjects who expressed any awareness of the manipulations of proxemic cues. All of these subjects were included in the analyses.

CHAPTER III
RESULTS

This chapter will be divided into several sections. First, the data analysis procedures employed will be explained. Then the effects of the proxemic cues on the ratings of speakers' persuasiveness, attractiveness, and status will be presented and their bearing on the predictions will be considered. Next, the effects of the proxemic cues on expertise ratings and attitude change induced in subjects will be discussed. This will be followed by a consideration of the effects of the perspective manipulation. Finally, effects obtained on the items assessing subjects' ratings of the speakers' nonverbal behaviors and their self-ratings of feelings while viewing the speech will be reported.

Data Analysis Procedures

Subjects responded on 40 seven-point scales which can be divided into seven groups as discussed in the previous chapter. These groups are labeled (a) persuasiveness, (b) attractiveness, (c) status, (d) expertise, (e) nonverbal behaviors, (f) subjects' feelings, and (g) ratings of seat belts. Whenever a subject failed to respond to an item, his or her score was taken to be the unweighted grand mean for that item. No subject left more than two items blank.

Multivariate analyses of variance (MANOVA) were performed on each of the seven groupings. Initial analyses, which included the particular speaker delivering the speech and sex of subjects as factors in the design,

revealed that these did not interact with the other independent variables. Consequently, subsequent analyses were 2 (perspective) X 2 (focus) X 3 (distance) X 3 (orientation) complete factorals with speaker and subject sex treated as blocking factors. By pooling interaction effects involving these factors with the error term the degrees of freedom for error were increased while the mean square error did not increase. Pallai's trace approximation of the F test statistic is reported for all overall effects, as suggested by Olson (1976). Unequal numbers of subjects in some of the conditions necessitated the use of a least-squares hierachical approach to computing treatment sums of squares in which each effect in the model was adjusted for all equal and lower order effects (Appelbaum & Cramer, 1974).

Significant interactions were broken down into multivariate simple effects in order to determine the patterning of conditions producing the interactions. Orthogonal contrasts were employed when necessary to assess differences among conditions comprising significant distance or orientation main effects. Wilks Lambda F approximation is reported for these simple effects and orthogonal contrast tests.

Multivariate effects were probed by perusing the standardized discriminant function coefficients, the univariate F tests, and the correlations with the composite score for each of the variables in the groups on which the multivariate effect was obtained. Generally, these three criteria were consistent in suggesting which variables contributed to a significant multivariate effect.

In addition, for those more comfortable with univariate statistics, Appendix C contains a table of the mean scale scores of the seven groupings for each condition comprising the perspective by focus by distance by

orientation interaction. These scales scores for each dependent variable group were computed by taking the average of the nonmissing scores for that group.

Predicted Effects of Proxemic Variables

Perceived Persuasiveness

Angle of orientation and speaker-target distance were predicted to affect perceived persuasiveness in the same manner. Both these proxemic cues should have interacted with the subjects' focus to produce the following effects: When the subjects were focusing on the attractiveness of the speaker, distance and angle of orientation should have been inversely related to perceived persuasiveness; when subjects' focus was on status, their ratings of the speakers' persuasiveness should have increased with increasing distances and angles of orientation.

These predictions received weak partial support for distance but were not supported for orientation. The focus by distance interaction on the persuasiveness items approached significance, F (8, 388) = 1.69, $p < .10$, whereas the focus by orientation interaction was not significant ($p > .5$). Breakdown of the focus by distance interaction indicated that the predicted simple main effect of distance approached significance only within the status-focus conditions, F (8, 388) = 1.63, $p < .11$, but not within the attractiveness focus conditions ($p > .29$).

This simple effect of distance within status focus conditions was produced primarily by the scales labeled not influential--influential and not convincing--convincing. These had the strongest correlations with the composite score (r's = -.65 and -.25 respectively) and the largest standardized discriminant function coefficients (-1.1 and -.77, respectively). In addition, the former was the only one of the scales in the persuasiveness grouping to evince this effect on the univariate level, F (2, 196) = 3.19, $p < .05$. Orthogonal polynomial trend analysis across the three levels of distance indicated that this manipulation was linearly, but inversely, related to the mean composite scores. Thus, as the distance from the speaker to the target decreased, subjects rated her as less convincing and less influential. (These two scales had negative standardized discriminant function coefficients). The only other significant multivariate effect on the persuasiveness items was a main effect of perspective which will be discussed in a separate section concerned with perspective effects.

In sum, there was some indication that perceived persuasivenss (specifically ratings of influence and convincingness) was an increasing monotonic function of distance when the listeners were focusing on status. However, there was no evidence that distance was inversely related to persuasiveness when listeners' focus was on speaker attractiveness. In addition, the predicted focus by orientation interaction was not obtained.

Attitude Change

Subjects who perceived the speaker as persuasive should have changed their attitudes toward the position advocated in her speech, that is, toward an anti-seat belts position. Thus, the predicted interactions of

focus by distance and focus by orientation on ratings of perceived persuasiveness should have also occurred on subjects' ratings of seat belts. Neither the focus by distance ($p > .12$) nor the focus by orientation ($p > .92$) was significant. This hypothesis received no support. The only significant multivariate effect on the seat belt items was a main effect of orientation. This effect will be discussed in a subsequent section.

Speaker Attractiveness and Status as Mediators

Subjects' perceptions of the speaker's attractiveness and status were predicted to be affected by the proxemic cues. Also, perceived persuasiveness and attitude change should have been influenced by these perceptions of attractiveness and status. Thus, ratings of attractiveness and status were predicted to serve as mediators between the proxemic cues on the one hand and perceived persuasiveness and attitude change on the other. Data bearing on these mediational relationships will be discussed in this section.

Attractiveness. Effects of the proxemic cues, distance and orientation, should only have affected ratings on the attractiveness items when the listeners were focusing on speaker attractiveness. When focusing on speaker status, attractiveness ratings should not have been affected by distance or orientation. Thus, interactions of focus with distance and focus with orientation should have occurred. Distance and orientation should have been inversely related to ratings of attractiveness when subjects were focusing on this characteristic of the speaker but should have had no effect on attractiveness ratings when subjects were focusing on speaker status.

Direct support for these predictions was not obtained: the focus by distance ($p > .44$) and the focus by orientation ($p > .84$) interactions were not significant. However, a perspective by focus by orientation interaction did occur, F (12, 384) = 1.82, $p < .05$. In order for this interaction to be consistent with predictions, the simple interactions of focus by orientation should have been significant within one or both levels of the perspective manipulation. This was not the case: the focus by orientation simple interaction was not significant within the target perspective ($p > .17$) or the observer perspective ($p > .50$).

Another way to break down this interaction would be to test the simple perspective by orientation interactions within levels of the focus manipulation. This interaction should only be significant when subjects were focusing on attractiveness; rating of attractiveness should not be affected by proxemic cues when subjects focused on status. Results are consistent with this reasoning. The simple interaction of perspective by orientation was significant for subjects focusing on attractiveness, F (12, 384) = 1.84, $p < .05$, but not for subjects focusing on status ($p > .32$).

Breaking this effect down further for subjects focusing on attractiveness, the simple effect of perspective is significant only within the 40 degree orientation conditions, F (6, 191) = 3.74, $p < .002$, but not within the 20 degrees ($p > .34$) and 0 degrees ($p > .09$) conditions. This significant effect was produced by ratings on the unsociable--sociable and unattractive--attractive scales. These had the strongest correlations with the composite score (r's = .74 and .59, respectively), the highest discriminant function coefficients (1.0 and .40, respectively), and the

corresponding univariate simple main effects were highly significant (p's < .005) for both these items. Discriminant score contrasts indicated that observer-subjects focusing on the attractiveness of a speaker who adopted a 40 degree angle of orientation rated her as less sociable and attractive than did target-subjects focusing on speaker attractiveness.

A significant multivariate perspective main effect, F (6, 191) = 3.41, p < .003, was also obtained on the attractiveness items. This main effect indicated that target-subjects rated the speaker as higher on attractiveness (i.e., more friendly, pleasant, sociable, attractive) than did observer subjects (see Table 2). This is consistent with several other effects of perspective which shall be discussed later. No other significant multivariate effects were obtained on the attractiveness items.

Status. Just as the proxemic cues should have only affected ratings of attractiveness when subjects were focusing on this dimension, ratings of speaker status should only have been affected by distance and orientation when subjects were focusing on status. This should have resulted in interactions of focus by distance and focus by orientation on the items designed to assess perceived status. When subjects were focusing on the speaker's attractiveness, her distance and orientation should not have had effects on status ratings. However, when they were focusing on status, subjects' ratings of the speaker on this characteristic should have been directly related to the distance and angle of orientation away from the target that she adopted.

The most direct support for these hypotheses would have been significant focus by distance and focus by orientation interactions. Neither of these occurred (p's > .60 and .29, respectively). However, the higher

order interaction of focus by distance by orientation by perspective approached significance, F (24, 776) = 1.48, $p < .07$. Yet, when this interaction was broken down none of the simple effects consistent with the above hypotheses were significant. The simple interaction of focus by distance by orientation is not significant for observers taken alone ($p > .15$) or for targets taken alone ($p > .19$). Also, the simple perspective by distance by orientation interaction is not significant for subjects focusing on status ($p > .78$).

A multivariate main effect of the focus manipulation was also obtained on the items assessing speakers' status, F (6, 191) = 2.73, $p < .02$. This effect was clearly produced mainly by the item labeled follower--leader. The univariate main effect of focus was significant at the .001 level for this item, it had the largest discriminant function coefficient (1.08, the next largest being -.50), and it had the highest correlation with the composite score ($r = .91$, the next highest being .59). As shown in Table 3, mean composite scores were higher for subjects focusing on status than for those focusing on attractiveness. Thus, the former thought the speaker was more of a leader than the latter. However, as mentioned previously, the focus manipulation did not interact as predicted with either distance or orientation to affect ratings of speakers' status. The only other significant multivariate effect on the status items was a main effect of perspective to be discussed in the section dealing with perspective effects.

Speaker Expertise

Effects of Proxemic Cues

Although the direct relationship between speaker expertise and persuasiveness is well established (Hovland, Janis, & Kelley, 1953), nonverbal behaviors that convey expertise have rarely been investigated. Consequently, no specific hypotheses were advanced concerning the effects of the manipulated proxemic cues on perceived expertise. However, whatever effects the proxemic cues had on perceived expertise were expected to be reflected in attitude change such that those cues which increased subjects' perceptions of the speakers' expertise should have also resulted in attitude change toward the position advocated by the speaker.

The only significant multivariate effects on the expertise items grouping were a main effect of perspective (to be discussed in a subsequent section) and a main effect of angle of orientation, F (12, 384) = 2.10, $p < .02$. To investigate the patterning of the orientation conditions comprising this effect, orthogonal polynomial components of trends were tested. The linear trend component was significant, F (1, 191) = 2.88, $p < .02$, and the quadratic component was not ($p > .13$). The linear effect of orientation was produced primarily by the scale labeled not proficient--proficient. This scale had the largest discriminant function coefficient (-.95), the strongest correlation with the composite score ($r = .43$) and was the only one of the six items of this grouping to show any indication of this trend on the univariate level, F (1, 196) = 3.17, $p < .08$. Univariate tests of the linear trend on the other items did not approach significance (p's > .3). Means for the orientation conditions on the proficiency item are shown in

Table 1. These were ordered such that subjects in the direct orientation conditions rated the speaker as least proficient and rating of proficiency increased with increases in angle of orientation. Subjects in the 40 degree orientation condition rated the speaker as most proficient.

TABLE 1

Means for Orientation Conditions on Items with Highest Discriminant Coefficients

	Rating Scale Item			
Orientation	Speaker: Not Prof.--Proficient	Seat Belts: Unsafe--Safe	Seat Belts: Bad--Good	Seat Belts: Unwise--Wise
0°	4.3	5.8	5.6	5.8
20°	4.6	5.5	5.5	5.6
40°	4.7	5.4	5.3	5.5

Note: Higher numbers on these seven-point scales indicate more favorable ratings.

Relation to Attidude Change

Increasing angle of orientation away from the target led to higher ratings of proficiency. Therefore subjects in the more indirect orientation conditions should have changed their attitudes more than subjects in the more direct orientation conditions. A multivariate main effect of orientation on the six seat belt rating items, F (12, 384) = 2.02, $p < .03$, indicated that this did occur. Orthogonal polynomial components of trends indicated that the linear component was significant, F (1, 191) = 2.50, $p < .03$, but the quadratic component was not ($p > .15$). This effect seems to have been produced primarily on the rating scales labeled unsafe--safe, bad--good, and unwise--wise. These scales had the highest standardized

discriminant function coefficients (1.02, 1.06, and .81, respectively), the strongest correlations with the composite scores (r's = .40, .27, and .33, respectively), and had the lowest univariate probability values (p's < .12, .20, and .21, respectively; all other p's > .58). As indicated by the means shown in Table 1, subjects in the direct orientation condition gave seat belts the most favorable ratings (i.e., most safe, wise, and good) and ratings became less positive as the speaker's angle of orientation away from the target increased.

Although the effect of the speakers' angle of orientation on subjects' ratings of their expertise was paralleled on the attitude items, angle of orientation did not affect ratings of speakers' persuasiveness (p > .22). This has implications for two topics to be considered in the discussion section. First, it might be taken as support for Nisbett and Wilson's (1977) suggestion that subjects are not aware of internal processes affecting them. Second, it provides some support against the claim that the variations in proxemic cues directly led to attitude change and then subjects used their ratings of the speaker's characteristics to rationalize their attitudes.

Perspective Effects

One supplemental purpose of the present study was to investigate possible differences in perceptions of proxemic cues resulting from differences in decoders' perspective. This was accomplished by manipulating perspective such that half the subjects were the direct targets of the speaker and the other half observed and listened to the speaker deliver the speech to someone else. This perspective manipulation produced several consistent effects which will be discussed in this section.

Significant multivariate main effects of perspective were obtained on the perceived persuasiveness, F (4, 193) = 3.36, $p < .01$, perceived attractiveness, F (4, 193) = 3.36, $p < .01$, perceived attractiveness, F (6, 191) = 3.41, $p < .003$, perceived status, F (6, 191) = 2.94, $p < .009$, perceived expertise, F (6, 191) = 3.59, $p < .002$, nonverbal behavior, F (6, 191) = 10.21, $p < .001$, and subjects' feelings items, F (6, 191)= 4.75, $p < .001$. The discriminant score contrasts and univariate means reported in Table 2 indicate that viewing the speech had a greater effect on target-subjects than on observer subjects.

TABLE 2

Means for Perspective Effects

Dependent Variables	Target	Observer
Persuasiveness items	0.24	-0.24
ineffective--effective	3.7	3.1
Attractiveness items	0.30	-0.30
unfriendly--friendly	3.9	3.2
unpleasant--pleasant	4.3	3.7
unsociable--sociable	3.5	3.0
unattractive--attractive	5.4	4.7
Status items	0.28	-0.28
low status--high status	4.8	4.2
prestigeless--prestigeful	4.4	3.9
Expertise items	0.33	-0.33
incompetent--competent	5.3	4.8
inexperienced--experienced	4.8	4.3

TABLE 2
continued

Dependent Variables	Target	Observer
Expertise items		
unskillful--skillful	4.8	4.4
incapable--capable	5.3	4.6
novice--expert	4.0	3.6
not proficient--proficient	4.8	4.2
Nonverbal Behavior items	0.53	-0.53
tense--relaxed	4.8	4.0
engaged in little eye contact--engaged in considerable eye contact	6.8	5.3
Subjects' Feelings items	-0.35	0.35
uncomfortable--comfortable	4.1	5.1
tense--relaxed	4.8	5.4
uninterested--interested	5.1	4.8

Note: Discriminant score contrasts are reported for each of the multivariate groupings. Univariate means are reported for individual items contributing most to the perspective effect on each grouping. On these items a score of 1 corresponds to the label listed first and a score of 7 corresponds to the label listed second.

The perspective main effect on the attractiveness items was discussed previously so it will not be considered further here. The perspective effect on the persuasiveness items was produced primarily by the item labeled ineffective--effective. This was the only one of the four items in the persuasiveness grouping to yield a significant univariate effect of perspective, F (1, 196) = 8.25, $p < .004$, it had the largest discriminant

function coefficient (1.44), and scores on this item correlated most highly with the composite score (r = .75). As shown in Table 2, the mean composite score and univariate mean on the ineffective--effective item for the target-subjects was higher than that for the observer-subjects, indicating that the former rated the speaker as more effective than the latter.

The perspective effect on the items assessing status, which was qualified by the marginally significant focus by distance by orientation by perspective interaction discussed earlier, was produced largely by the scales labeled low status--high status and prestigeless--prestigeful. Univariate perspective main effects were significant beyond the .001 level for both items, these items had the largest discriminant function coefficients (.741 and .753, respectively), and they correlated most strongly with the composite score (r = .84 and .77, respectively). A higher mean composite score for target-subjects thereby indicates that they rated the speaker as more prestigeful and of higher status than did observer-subjects (see Table 2).

Perusal of the six items designed to assess aspects of expertise indicated that all six contributed somewhat to the multivariate effect of perspective found on these items. Univariate main effects of perspective were significant beyond the .02 level on all six items and they all correlated highly with the composite score (r's ranged from .46 to .95). However, the scale labeled incapable--capable had the largest standardized discriminant function coefficient (.961, the next largest being .341) and the strongest correlation with the composite score (r = .95, the next strongest being .66). As shown in Table 2, mean composite scores were

higher for target-subjects, indicating that they thought the speaker was more capable than did observer subjects. In addition, examination of the univariate means for each of the other five scales in this set shows than on every scale targets rated the speaker more favorably (i.e., more competent, experienced, skillful, expert, and proficient) than did observers.

The main effect of perspective on the nonverbal behavior items was for the most part produced by ratings on the scales labeled tense--relaxed and engaged in little eye contact--engaged in considerable eye contact. These items had the largest discriminant function coefficients (.484 and .877, respectively), the strongest correlations with the composite score (r's = .46 and .83, respectively), and the univariate perspective main effects were significant beyond the .001 level on these two variables, but not on the other measures of nonverbal behavior. Mean composite scores and univariate means reported in Table 2 indicated that target-subjects as compared to observer subjects perceived the speakers as engaging in more eye contact and as appearing more relaxed.

Of the scales assessing subjects' self ratings of their feelings, the ones labeled uncomfortable--comfortable, tense--relaxed, and inattentive--attentive were affected most by the perspective manipulation. These three items were the only ones of the six in this group to reveal significant ($p < .05$) univariate effects of perspective, they had the largest discriminant function coefficients (.85, .39, and -.62, respectively), and they had the strongest correlations with the composite score (r's = .78, .53, and -.37, respectively). Mean composite scores and univariate

means indicated that target-subjects felt less comfortable, less relaxed, but more attentive than did observer subjects.

Ancillary Variables

Other Nonverbal Behaviors

Subjects rated the speaker on measures of non-proxemic nonverbal behaviors (e.g., relaxation, activity, eye contact, vocal cues) in order to determine if the speakers were inadvertently varying these nonverbal cues across the distance and orientation conditions. None of the main or interaction effects involving either distance, orientation, or both was significant. This suggests that, as perceived by the subjects, these nonverbal behaviors did not significantly vary across the distance and orientation conditions.

The only multivariate effects obtained on the nonverbal behavior items were the main effect of perspective discussed previously and a main effect of focus, F (6, 191) = 2.13, $p < .05$. This latter effect was primarily produced by ratings of the speaker on the tense--relaxed, anxious--calm, soft voice--loud voice, and spoke slow--spoke fast scales. These all had substantial discriminant function coefficients (.41, .44, .71, and -.64, respectively) and moderate correlations with the composite scores (r's = .47, .60, .36, and -.45, respectively). In addition, the univariate main effect of focus was significant for the anxious--calm scale ($p < .04$) and approached significance for the tense--relaxed ($p < .11$) and the spoke slow--spoke fast ($p < .12$) scales. As shown in Table 3, subjects focusing on the speakers' attractiveness had lower composite scores than subjects focusing on status, indicating that they rated the speaker as less relaxed, less calm, softer in volume, and faster in speech speed. The composition of this

composite score resembles a dominance factor reported by Mehrabian (1972). This might explain other main effects of the focus manipulation, as will be discussed in the discussion chapter.

Subjects' Feelings

Subjects' ratings of their own personal feelings and states while viewing the speech were assessed to determine if the variations in distance and/or orientation affected subjects self-perceptions. For example, it could be possible that subjects in the close distance conditions might have felt uncomfortable and tense because their personal space (Sommer, 1969) was violated. The spatial cues, however, had no effects on subjects' self-reports of their feeling, as indicated by the lack of any significant multivariate effects involving these factors.

The only significant multivariate effects obtained on the subjects' feelings items were the main effect of perspective mentioned previously and a main effect of focus, F (6, 191) = 2.26, $p < .04$. This focus effect was produced primarily by subjects' self-ratings on the anxious--calm scale. This scale was the only one of the six in this group to reveal a significant univariate main effect of focus, F (1, 196) = 9.33, $p < .003$, it had by far the largest discriminant function coefficient (1.2, the next largest being -.59 on the tense--relaxed scale), and the strongest correlation with the composite score ($r = .81$, the next largest $r = .45$, obtained on the uninterested--interested scale). As shown in Table 3 subjects focusing on attractiveness had lower composite scores than subjects focusing on status. Thus, the former felt less comfortable than the latter.

TABLE 3

Means for Focus Effect

Dependent Variables	Focus Condition	
	Attractiveness	Status
Status items	-0.27	0.27
follower--leader	4.6	5.2
Nonverbal Behavior items	-0.23	0.23
tense--relaxed	4.2	4.6
anxious--calm	4.9	5.3
soft voice--loud voice	4.8	5.1
spoke slow--spoke fast	3.6	3.3
Subjects' Feelings items	-0.23	0.23
anxious--calm	4.8	5.5

Note: Discriminant score contrasts are reported for each of the three multivariate groupings to evidence a significant focus effect. Univariate means are reported for individual items contributing most to the effect on each grouping. On these items a score of 1 corresponds to the label on the left and a score of 7 corresponds to the label on the right.

CHAPTER IV
DISCUSSION

Discussion of the present experiment will focus on three major topics. First, the general failure to find the predicted relationships between the manipulated proxemic cues and perceptions of attractiveness and status will be considered and several possible explanations will be offered. Second, the obtained effects of the speakers' angle of orientation on subjects' perceptions of expertise and on attitude change will be reviewed and the proposed mediational model involving these variables will be discussed. Other research involving proxemic cues and speaker characteristics will be discussed in light of these findings. Finally, the effects of the listeners' perspective on their perceptions will be considered and possible explanations derived from work on attribution processes will be proposed.

Proxemic Cues and Perceptions of Attractiveness, Status, and Persuasiveness

Generally, results of the present experiment did not support the hypotheses concerning the relationships between the distance and angle of orientation adopted by a speaker vis-a-vis the addressee and the subjects' perceptions of the attractiveness, status, and persuasiveness of that speaker. Aside from the higher order interaction of perspective by focus by orientation on the attractiveness ratings and the marginally significant ($p < .07$) perspective by focus by distance by orientation interaction on the status ratings, both of which were not consistent with the hypotheses,

no other significant multivariate effects involving distance or orientation were found on the attractiveness or status ratings.

The interaction on the items assessing perceptions of speaker attractiveness indicated that, as compared to target-subjects, observer-subjects focusing on the attractiveness of a speaker who adopted a 40 degree angle of orientation rated her as less sociable and attractive. This might have occurred because the angle of orientation may have been perceived as even more indirect from the observers' vantage point. This explanation could be checked by asking both target- and observer-subjects to estimate the angle of orientation adopted by the speaker vis-a-vis the target.

Breakdowns of the four-way interaction on the status ratings did not lead to any clear-cut and meaningful interpretations. Consequently, given the tentativeness of the probability value associated with this effect, no post hoc explanations of the patterns of the conditions will be offered.

The only obtained effect which is consistent with the predictions is the marginally significant focus by distance interaction on the persuasiveness ratings. This interaction indicated that, as predicted, a speaker's distance vis-a-vis and addressee is directly related to attitude change when the speaker's status is salient to the listener. However, the other half of this predicted interaction, an inverse relationship between distance and persuasiveness when subjects are focusing on attractiveness, was not obtained. Given the marginal probability value associated with this interaction ($p < .10$) and the failure to find any indication that these effects of proxemic cues on perceived persuasiveness were mediated by perceptions of attractiveness or status, the data obtained in the present experiment

must be taken as nonsupport of the hypothesized relationships between the proxemic cues and perceptions of status, attractiveness, and persuasiveness.

As is usually the case when hypotheses are not supported, several possible explanations may be offered. It could simply be the case that the hypotheses are incorrect. Alternatively, the hypothesized relationships might only hold under certain conditions which still need to be delineated. First, such possible conditions will be considered and an integration of the present results with those obtained in the past will be proposed. Second, a methodological issue concerning the status of the speaker will be raised, several possible alternative strategies will be suggested, and their conceivable effects on results will be considered.

Integration with Related Research

Many of the experimental situations designed to investigate the effects of proxemic nonverbal behaviors on perceived communicator characteristics have been highly contrived and lacking in mundane realism. In one study investigating nonverbal concomitants of persuasiveness which is somewhat similar to the present experiment, Mehrabian and Williams (1969) played 30 second video-taped recordings of a speaker to subjects and had them rate the speaker's convincingness. The speaker's faces were covered by blank cardboard masks and the authors do not state how much of their bodies were visible on the video-tape monitor screen. Nevertheless, in the close distance condition the speakers were four feet from the camera, making it unlikely that their entire bodies were visible to the audience. Subjects were told that the experiment was specifically investigating

"things a speaker can do, besides the things that he says, which may make him more or less convincing to his listener" (p. 49). Additionally, the sound was turned off on the recording and subjects were told that "we have shut off the sound portion of the recording so that you can attend only to the communicator's ways of sitting and his selected position in the room relative to you . . . . These positions and ways of sitting are what we would like you to attend to" (p. 50).

It is not surprising that the speakers' proxemic cues affected subjects' perceptions in this situation. However, it is unlikely that an individual would experience a naturally occurring situation similar to this one unless he happened to be deaf, color blind, and was watching a speech delivered by the Lone Ranger or some other person wearing a mask. Under such conditions, what else other than proxemic and kinesic cues can the person base his or her perceptions upon? In fact, Mehrabian and Williams specifically told subjects to attend only to these cues.

In another study concerned with proxemics (specifically, interpersonal distance) and persuasion, Albert and Dabbs (1970) made the situation somewhat more realistic. Subjects in their experiment actually received two face-to-face communications delivered by a trained speaker who varied his distance from them. Subjects' ratings of the speakers' characteristics after viewing the speeches indicated that ratings of liking, status, and judged persuasiveness were not affected by the distance he adopted relative to them.

In an experiment not specifically concerned with persuasiveness or attitude change, Little (1968) presented subjects with stick figures placed varying distances from each other and asked them to rate the degree to which the people depicted by the figures liked each other. In this

situation the only cues available which subjects could use to make these judgements were those involving the distance between the figures. Thus, it is not surprising that the distance between the figures in Little's study, and the proxemic cues manipulated in the Mehrabian and Williams (1969) study did affect subjects' perceptions. However, when other verbal and nonverbal cues were present, as was the case in the Albert and Dabbs study, ratings of the speakers' liking, status, and persuasiveness were not affected by the distance manipulation.

In the present study attempts were made to maintain a high level of mundane realism. The speakers were actually in the same room with the listeners. Thus, their entire body was observable to the subjects in living color. The speakers' faces were not covered by masks so facial expressions and gaze behaviors were clearly visible to subjects. Subjects were not told to focus specifically on the proxemic cues. In addition, the speakers actually delivered speeches which the subjects heard. In such a situation there are many cues, both verbal and nonverbal, in addition to proxemic behavior, that can be used by subjects when forming impressions of the speakers. Under these conditions the highly subtle and implicit proxemic cues (Mehrabian, 1972) might play a minor role in subjects' perceptual processes, at least during the early stages of interaction.

This reasoning suggests that in the present situation and in the one employed by Albert and Dabbs (1970) subjects may have relied on more obvious and explicit cues, such as the speakers' words, when forming impressions of their attractiveness, status, and persuasiveness. Consequently, more implicit and subtle cues such as interpersonal distance and angle of orientation had no effects on perceptions of these characteristics. Given this

possible integration of the present results with previous data, the following hypotheses are proposed.

During the initial stages of interaction individuals attempt to determine the line and face (Goffman, 1955; 1959) or social identity (Schlenker & Forsyth, Note 2) that the other is trying to project. Goffman (1955, p. 213) defined a line as "the pattern of verbal and nonverbal acts" by which individuals convey their definition of the situation and evaluations of the participants, including themselves. He then went on to define face as "the positive social value a person effectively claims for himself by the line others assume he has taken during a particular contact (Goffman, 1955, p. 213). In order to infer the line and face a person is trying to claim, individuals probably rely for the most part on obvious and explicit cues such as what the person says. These cues are referred to by Goffman (1959, p. 2) as cues given. They are verbal and nonverbal symbols which an individual "uses admitedly and solely to convey the information that he and the others are known to attach to these symbols." At these initial stages of interaction more implicit cues such as distance and orientation are less important in the person perception process than explicit ones. Implicit cues may be heavily weighed in initial interaction stages only when explicit ones are unavailable.

As the interaction progresses and the individuals have determined the lines and faces that they are going to adopt, then implicit cues may take on increased importance. These implicit cues are referred to by Goffman (1959, p.2) as cues given off, which he defined as "a wide range of action that others can treat as symptomatic of the actor, the expectation being that the action was performed for reasons other than the

information conveyed in this way." These cues given off are often used by individuals to "check up upon the validity of what is conveyed" (Goffman, 1959, p. 7) by cues given in order to ascertain whether a person is authorized to adopt the particular line and face that he or she has claimed. Also, these implicit cues can support a particular line and allow the perceiver to become more confident in his initial perceptions.

Finally, in the latter stages of interactions, after their lines and faces have been established, interactants form impressions of one another which are less integrally related to these lines. For example, the interactants may decide how much the other person likes them or they may infer the status of this other person. At this point both explicit and implicit information in the form of verbal and nonverbal behaviors may be employed.

Thus, interactions progress through three stages. In the first, individuals attempt to determine the lines and faces claimed by others. At this stage explicit cues given are used. Only if explicit cues are unavailable will more implicit cues such as proxemic behavior be employed in person perception. In the second stage of interaction individuals check up on the lines and faces adopted by others. Here, implicit cues given off are most important. As Goffman suggested, individuals often operate under the assumption that these cues given off are not controlled by the actor and consequently may reveal things about him that he may be trying to hide. During the third stage of interaction individuals attempt to gain information about one another which is not necessarily related to their lines and faces. At this stage both explicit and implicit cues may be used.

In the present experiment the situation was presented to subjects as one in which they would judge the persuasiveness of a speaker delivering a speech. In this situation, the first task of the subjects was to determine the line adopted by the speaker. This involves information such as who he or she is, what he or she is going to talk about, and his or her alleged qualifications to talk about this topic. Judging from the physical appearance of the speakers the subjects could most probably assertain who they were. The speakers were undergraduate students and looked consistent with this role. Subjects could tell what the speaker was talking about simply by listening to the speech. The topic of the speech was explicitly stated very early in the speech. In addition, the speaker's alleged qualifications to talk about the topic could be judged from aspects of the contents of the speech such as the quality of the arguments used and the amount and accuracy of facts presented. However, in order to check up on the line and face claimed by the speakers, subjects may have relied upon more implicit cues such as the speaker's angle of orientation. Consequently, at this stage of interaction, the nonverbal cue of orientation had an opportunity to affect perceptions. The effects of angle of orientation on perceived expertise and attitude change will be discussed shortly.

These hypotheses concerning the hierarchical processing of verbal and nonverbal information should be investigated in future research. Situations could be created in which individuals who do not know one another interact for varying periods of time in studies described to them as investigating person perception. One of the interactants could actually be a confederate who controls aspects of his verbal and nonverbal behaviors throughout the interaction. Both explicit and implicit cues could be

manipulated at all three stages of the interaction process. The interactions could be stopped after varying time periods and subjects could be asked questions concerning their impressions of the confederate-interactant.

If the situation is presented as one in which the subject will hear a persuasive communication, it is expected that subjects will first try to determine who the speaker is and what position he or she is advocating. The words of the persuasive communication should be the primary source of information at this point. Consequently, variations in these explicit cues, but not variations in implicit cues, should have effects on perceptions made during this early stage, unless the explicit cues do not provide appropriate information. During the second stage of interaction subjects should employ implicit cues to check up on the line claimed by the speaker. At this point, manipulations of implicit cues should affect perceptions of speakers' characteristics, particularly those closely related to the line claimed--in this case expertise and persuasiveness. During the third stage both explicit and implicit cues should affect subjects' perceptions of speaker characteristics not directly relevant to the line claimed. During this stage of the persuasive communication situation, both manipulations of explicit and implicit cues should be used by subjects to form impressions of speaker characteristics such as status and attractiveness.

Methodological Issue Concerning Speakers' Status

One issue which should be addressed in studies such as this one concerns the nonmanipulated cues related to status which must be present when an actual speaker is used. Subjects in the present experiment were able to see and hear the speakers and could base their perceptions of status on a number of cues other than those manipulated. One such cue is

physical appearance. The speakers employed were undergraduate students at the University of Florida, as were the subjects. Thus, subjects may have inferred from their physical appearance that the speakers were undergraduate students and therefore may have perceived no status differential between themselves and the speakers. This may have prevented any effects of the proxemic manipulations on perceptions of status. However, the speakers were working in the experiment and this should have increased the status differential, making status somewhat more ambiguous in the eyes of the subjects.

Future researchers might want to manipulate the status differential between the speaker and the audience, the ambiguity of the speaker's status, and the proxemic cues employed by the speaker to determine if the former two variables interact with the proxemic cues to affect perceptions.

Several Other Possible Reasons for Failure to Support Hypotheses

Two additional explanations for the failure to find the predicted relationships between the proxemic cues and perceptions of attractiveness and status will be discussed. The first concerns the possibility that Type II errors may have occurred because the cell sizes were small. The second suggests that differences in the distances chosen were not large enough to be noticeable to subjects.

All MANOVAs performed were four way factorials in which some of the higher order interactions had four degrees of freedom. Since the number of subjects in each cell ranged from six to eight, the degrees of freedom for error was small. Consequently, the power of the MANOVAs performed was

probably quite small. This may have prevented any real difference from obtaining statistical significance. However, this possibility seems remote because none of the predicted interactions had probability values that even approached significance.

Alternatively, the failure to find any effects do to the distance manipulation may have resulted because the differences among the distances employed may have been too small to be noticed by subjects. For example, if five feet was not perceived as different from seven feet no effects of this manipulation would be expected. This explanation could be tested by simply asking subjects how far the speaker was from the target.

Orientation, Expertise, and Attitude Change

The effects of the speaker's angle of orientation on subjects' ratings of her expertise are consistent with the effects of orientation on subjects' attitudes toward the topic advocated by the speaker. Taken together with other data previously presented, these results suggest that perceptions of speakers' expertise might be a more important mediator between proxemic cues and attitude change than either speakers' status or attractiveness. In this section research on proxemics and persuasion will be viewed in light of this suggestion.

In the present experiment, as the angle of orientation adopted by the speaker relative to the addressee became more indirect, ratings of the speaker's proficiency increased. In addition, this main effect of orientation was paralleled on the items assessing subjects' attitudes toward the topic employed in the speech. As the angle of orientation adopted by the speaker became more indirect, subjects' attitudes toward seat belts became less favorable, that is, they became more in line with the position

advocated in the speech.

In the situation employed (i.e., one in which subjects heard a communication in an experiment described to them as investigating persuasion) the proficiency of the speaker was no doubt one characteristic that subjects should have keyed upon. Results indicate that the angle of orientation adopted by a speaker is used by the audience in order to make judgements concerning his or her proficiency (and, more generally, expertise). As noted earlier, the expertise of a speaker has been shown to be directly related to attitude change induced by the speaker (cf. Hovland, Janis, & Kelley, 1953; Tedeschi, Schlenker, & Bonoma, 1973). Thus, speakers who were rated as more expert should have induced more attitude change. This is exactly what occurred in the present study.

It is possible that effects of proxemic cues on ratings of communicator characteristics obtained in past research might reflect a halo effect of expertise or credibility. In the present experiment great care was taken to construct dependent measures which would assess several communicator characteristics. Several scales related to each characteristic were included and each grouping was analyzed using multivariate analysis of variance which permitted assessment of the contribution of each individual scale to any multivariate effect. In some previous research on proxemics and persuasion the dependent variables have not been as complete. In their decoding study, Mehrabian and Williams (1969) had only one dependent variable, ratings of the convincingness of the communicator on one seven-point, Likert-type scale. Subjects did not rate any other characteristics of the speaker. Convincingness may be considered a measure of expertise or credibility just as easily as it is considered a measure of persuasiveness.

The dependent measures employed by Albert and Dabbs (1970) were somewhat more complete. They included two attitude items for each of the topics employed as well as items assessing subjects perceptions of the speakers' liking, status, style of presentation, and persuasiveness. The only speaker characteristic affected by the distance manipulation in their study was perceived expertise.

In a study with rather complete dependent measures of subjects' ratings, Wissmiller and Merker (1976) had subjects rate others on three separate sets of interpersonal judgements, each of which included a number of dimensions: (a) credibility--which included competence, composure, character, extroversion, and sociability, (b) interpersonal attraction--which involved social, physical, and task dimensions of attraction, and (c) similarity--including attitudinal, values, and background similarity. Main effects of interpersonal distance were found on the competence, composure, character, and sociability dimensions of credibility, on the social- and task-attraction dimensions, and on the attitudinal, values, and background aspects of similarity.

Thus, the following causal relationships among proxemic cues, communicator characteristics, and attitude change are proposed. Variations in the proxemic cues engaged in by the speaker should affect listeners' perceptions of the speaker's characteristics (e.g., expertise) and variations in these perceptions of communicator characteristics should in turn lead to differential attitude change.

The data obtained in this experiment, while consistent with the above model, does not unequivocally support it. Subjects perceptions of the communicators' characteristics were assessed at approximately the same time

as their attitudes toward seat belts. Consequently, the causal ordering among these variables cannot be assessed. It is of course possible that variations in the speakers' proxemic behavior directly led to attitude change and subjects used ratings of the speakers' characteristics in order to rationalize and justify this change. Alternatively, variations in the speakers' proxemic cues could have directly affected both subjects' perceptions of the speakers' characteristics as well as their attitudes toward seat belts.

Some data obtained in this experiment indirectly bears on one of these alternative relationships. It will be recalled that although the speaker's angle of orientation did affect subjects' ratings of seat belts and their perceptions of the speaker's proficiency, it did not have a significant effect on subjects ratings of the speaker on the items related to persuasiveness. It seems that if subjects were using their ratings of the speaker's characteristics to rationalize and justify their attitude change (which, according to this model, was directly affected by the speaker's proxemic behavior) then this rationalization should have occurred on the persuasiveness ratings as well as on the expertise ratings. If subjects found that after listening to the speech, their attitudes toward seat belts were consistent with those advocated by the speaker, they should have rated the speaker as persuasive in order to justify their attitude change. This did not occur, possibly suggesting that the ratings of speakers' characteristics were not simply used by subjects to justify their attitudes. Although this reasoning certainly does not rule out this alternative causal model, it does seem to shed some doubt on its validity.

The failure to find any effects of the speakers' angle of orientation on subjects' ratings of their persuasiveness even though orientation did affect expertise ratings and attitude change may be taken as support for Nisbett and Wilson's (1977) proposition that individuals are often not aware of and cannot verbalize their internal cognitive processes. Although subjects watching a speaker who adopted a more indirect orientation rated her as more proficient and reported attitudes more consistent with those advocated by her than did subjects watching a speaker who adopted a more direct orientation, they did not rate the speaker as more persuasive. If we assume for a moment that (a) this does not simply reflect a Type II error and that (b) persuasiveness is in fact related to attitude change, then this suggests that subjects might not have been aware that their attitudes were affected by viewing the speech. Future research could specifically get at this unawareness hypothesis by asking subjects if their attitudes and persuasiveness ratings were affected by viewing the speech.

As a more general level, this issue of awareness of cognitive processes is an important one in the area of nonverbal communication. It is interesting to ask whether people are aware that their perceptions of others might be affected by the nonverbal behaviors engaged in by them. Nisbett and Wilson's analysis would suggest that they are often not aware of this influence.

Focus Effects

One somewhat consistent effect that occurred in the present study, although it was not predicted, was the main effect of the focus manipulation. Multivariate focus main effects occurred on the nonverbal behavior,

status, and subjects' feelings items. Subjects focusing on the speakers' status rather than attractiveness rated them as higher on the status items (specifically, higher on leadership). The focus effect on the nonverbal behavior items indicated that subjects focusing on status rather than attractiveness rated the speaker as more relaxed, more calm, louder, and slower in vocal speed. Finally, the effect on the subjects' feelings items indicated that subjects focusing on the speakers' status felt more comfortable than subjects focusing on her attractiveness.

The following interpretation of these effects is one of several that may be offered. Focusing on the speakers' status rather than attractiveness may have made certain cues more salient to the subjects. These cues (i.e., relaxed, calm, loud voice, slow voice speed) have been found to be related to a speaker's dominance. Factor analysis of data from several of his own studies described by Mehrabian (1972) have found that measures of speech rate and speech volume load positively on the same factor along with a measure of vocal activity. In addition, factor analysis reported by Mehrabian and Williams (1969) of the nonverbal behaviors measured in one of their encoding studies indicated that the comfort of the speaker, as estimated by listeners, loaded positively on a dominance factor. Thus, when focusing on status certain aspects of the speakers became salient to subjects in the present study which increased perceptions of the speakers' dominance. Consequently, speakers received higher leadership ratings in the status-focus conditions. In addition, because the speaker was perceived as calm and relaxed when subjects focused on status and this may have made the situation more pleasant, the subjects themselves may have felt more comfortable in these conditions.

Perspective Effect

One factor which may influence attributions made based upon nonverbal behavior is the perspective of the attributor relative to the actor. Perspective effects, which are the only other significant multivariate effects not discussed thus far, will be considered in this last section. In the persuasive communication situation, listeners can be divided into two groups: those who are the direct targets of the speaker's communication and those who see and hear a communication which is not specifically addressed to them. One possible hypothesis is that because of principles of attribution such as hedonic relevance and personalism (Jones & Davis, 1965) direct targets of communications should be more affected by the communicator's nonverbal behaviors than should observers. Hedonic relevance refers to the degree to which the actor's behaviors directly affect the attributor. Personalism refers to the attributor's belief that the actor behaved specifically to affect him or her. Both hedonic relevance and personalism increase the probability that the attributor will attribute the actor's behaviors to dispositions rather than to external causes and both should be greater for direct targets than for observers of persuasive communications. Thus, direct targets, rather than observers, should be more affected by persuasive communications.

Results of the present experiment are consistent in showing that this did occur. As compared to observers, direct targets of the speech rated the communicator as more persuasive (particularly, effective) more prestigeful, of higher status, more expert (i.e., capable, competent, experienced, skillful, proficient) and more attractive. This suggests that the speakers had a greater impact on targets than on observers. Subjects' ratings of their personal feelings while viewing the speech also support this claim.

Target subjects felt more attentive, less comfortable, and less relaxed while viewing the speech than did observer subjects.

Although main effects of perspective (i.e., direct-targets versus observers) were consistently found, the perception manipulation did not interact with the manipulations of the distance and orientation cues. Based on the principles of hedonic relevance and personalism, it would be hypothesized that the nonverbal cues would have greater effects on the target-subjects than on observer subjects. This was not the case in the present study. Any effects of the proxemic cue manipulations did not interact with subjects' perspective. This implies that nonverbal cues are interpreted similarly by direct targets and observers.

Another study of the effects of proxemic cues on perceived communicator characteristics also manipulated the perspective of the raters. Imada and Hakel (1977) employed an interview situation in which subjects either served as (a) the interviewer, (b) an observer of the interview in the room where the interview was taking place, or (c) an observer who saw the interview over a live closed circuit T.V. system. The perspective manipulation by itself did not affect ratings of the interviewee--confederate, nor did it interact with the nonverbal cues engaged in by the interviewee. The failure to find the perspective by nonverbal behavior interaction is consistent with the results of the present study. Taken together these results suggest that the perspective of the perceiver does not significantly affect interpretations of nonverbal behavior. Future researchers should also manipulate perspective to determine if it makes any difference for other types of nonverbal cues and in other situations different from the ones employed here and in the Imada and Hakel study.

APPENDIX A
SCRIPT OF SPEECH

I would like to argue the point that seat belts should not be worn. To me seat belts are a hazard when driving. Not only don't they save lives, but there have been many instances where persons trapped in autos after an accident have died as a result of wearing seat belts. This suggests to me that something happens during and after the accident that the automakers aren't quite aware of. During an accident--say a car goes through a guardrail and flips--the person who is under the steering wheel and his or her passengers are initially thrown into a complete state of shock. Not only can't they believe what is actually occurring, but they are so terrified that decisions as to what to do are practically impossible. The fear of actually flipping can cause some persons to go into a state of total non-being. By this I mean that they aren't aware of their own bodies and how they should react to the situation. Muscular and mechanical operations are frozen. When the shock begins to wear off, fumbling to get the seat belt loose poses another problem. If only there was a way for the seat belts to release automatically--say something after impact or whatever--then I'm sure most people could be saved.

Another drawback against seat belts is that they are extremely uncomfortable and get in the way. No one bothers to buckle up anyway, so why should these things be made just to get in the way and raise the

the price of the car. The most you can do is to take them out of the car yourself or stick them between the seat somewhere.

During short distance driving, which most of us normally do, seat belts are an extreme nuisance. For the person who is in a hurry to get to a store before it closes, or whatever, the couple of extra seconds it takes to adjust those belts are not worth the time. Besides, short distance driving doesn't require excessive speeds, so if an accident does occur is usually is a very minor one, that is, one in which no one is actually injured.

In conclusion, I believe that seat belts are more of a nuisance and hazard than a help and are simply not worth wearing.

APPENDIX B
PERSUASIVENESS QUESTIONNAIRE

Please rate the speaker in the speech you just saw on each of the following items by placing an X somewhere along each line. Read the following example before beginning:

example: young :___:___:___:_X_:___:___:___: old

If you thought the speaker was very young you would place an X near the word "young". If you thought the speaker was very old you would place an X near the word "old". If you thought she was about half way between young and old you would place an X where it appears above. Please be sure to respond to each and every item.

persuasive :___:___:___:___:___:___:___: not persuasive

convincing :___:___:___:___:___:___:___: unconvincing

not influential :___:___:___:___:___:___:___: influential

ineffective :___:___:___:___:___:___:___: effective

unfriendly :___:___:___:___:___:___:___: friendly

dislikable :___:___:___:___:___:___:___: likable

unpleasant :___:___:___:___:___:___:___: pleasant

warm :___:___:___:___:___:___:___: cold

sociable :___:___:___:___:___:___:___: unsociable

attractive :___:___:___:___:___:___:___: unattractive

follower :___:___:___:___:___:___:___: leader

not respected :___:___:___:___:___:___:___: respected

submissive :___:___:___:___:___:___:___: dominant

high status :___:___:___:___:___:___:___: low status

prestigeful :___:___:___:___:___:___:___: prestigeless

high standing :___:___:___:___:___:___:___: low standing

incompetent :___:___:___:___:___:___:___: competent

inexperienced :___:___:___:___:___:___:___: experienced

unskillful :___:___:___:___:___:___:___: skillful

capable :___:___:___:___:___:___:___: incapable

expert :___:___:___:___:___:___:___: novice

proficient :___:___:___:___:___:___:___: not proficient

relaxed :___:___:___:___:___:___:___: tense

calm :___:___:___:___:___:___:___: anxious

passive :___:___:___:___:___:___:___: active

engaged in little eye contact :___:___:___:___:___:___:___: engaged in considerable eye contact

soft voice :___:___:___:___:___:___:___: loud voice

spoke slow :___:___:___:___:___:___:___: spoke fast

On the following items please rate your <u>own</u> personal feelings while viewing the speech:

comfortable :___:___:___:___:___:___:___: uncomfortable

calm :___:___:___:___:___:___:___: anxious

tense :___:___:___:___:___:___:___: relaxed

inattentive :___:___:___:___:___:___:___: attentive

interested :___:___:___:___:___:___:___: uninterested

concerned :___:___:___:___:___:___:___: unconcerned

Now that you have heard the speech we would like to know how you currently feel concerning the topic discussed. Therefore, please rate <u>the use of seat belts</u> on each of the following six scales:

safe :___:___:___:___:___:___:___: dangerous

wise :___:___:___:___:___:___:___: foolish

helpful :___:___:___:___:___:___:___: harmful

detrimental :___:___:___:___:___:___:___: beneficial

bad :___:___:___:___:___:___:___: good

a waste of time :___:___:___:___:___:___:___: time well spent

APPENDIX C

TABLE 4

Mean Scale Scores for Perspective by Focus By Distance
by Orientation Conditions

Conditions	N	Scales: Persuasiveness	Attractiveness	Status	Expertise	Attitude
Observers						
Attractiveness-Focus						
3 Feet						
0°	6	2.5	3.1	3.6	3.1	6.1
20°	7	3.6	2.9	4.7	4.7	5.4
40°	6	4.0	3.7	4.6	4.4	5.1
5 Feet						
0°	6	2.2	2.5	4.3	3.6	5.7
20°	7	3.7	3.7	4.1	4.4	5.3
40°	7	3.4	2.9	4.6	4.3	5.1
7 Feet						
0°	6	3.2	3.9	4.3	4.1	5.5
20°	7	3.8	4.0	4.6	4.3	5.1
40°	6	2.6	3.4	4.2	4.5	5.0
Status-Focus						
3 Feet						
0°	6	2.9	3.1	4.5	4.2	5.1
20°	6	3.7	3.3	5.1	4.4	6.0
40°	7	3.1	3.2	3.9	4.3	5.8

Appendix C, Table 4 - continued.

Conditions	N	Scales: Persuasiveness	Attractiveness	Status	Expertise	Attitude
Observers						
Status-Focus -cont.						
5 Feet						
0°	6	2.1	3.9	4.5	4.6	6.2
20°	6	3.0	3.5	4.5	4.2	5.9
40°	6	3.5	4.3	5.2	4.7	4.8
7 Feet						
0°	7	3.4	3.9	4.2	4.4	5.7
20°	6	3.3	4.5	4.7	5.1	5.8
40°	6	3.4	4.0	4.5	4.7	6.4
Targets						
Attractiveness-Focus						
3 Feet						
0°	6	3.1	4.0	5.1	5.6	5.7
20°	7	4.1	3.5	4.6	5.4	5.6
40°	6	3.5	4.0	4.4	4.4	5.4
5 Feet						
0°	7	3.3	4.1	4.9	5.1	5.3
20°	6	3.0	3.6	3.8	4.1	5.6
40°	6	3.8	4.6	5.1	4.9	5.1
7 Feet						
0°	8	2.9	4.1	4.5	4.6	5.7
20°	7	3.5	3.7	4.8	4.8	5.4
40°	7	3.2	4.8	5.4	4.6	5.8

Appendix C, Table 4 - continued.

Conditions	N	Scales: Persuasiveness	Attractiveness	Status	Expertise	Attitude
Targets						
Status-Focus						
3 Feet						
0°	7	3.3	4.5	4.7	4.7	5.6
20°	8	3.8	3.8	4.8	5.0	6.2
40°	8	3.5	4.0	4.7	4.4	5.8
5 Feet						
0°	6	3.6	4.1	4.8	4.6	4.9
20°	7	3.3	3.9	4.8	4.7	4.6
40°	7	2.6	3.9	5.2	4.7	5.6
7 Feet						
0°	6	3.7	4.5	5.5	5.4	5.8
20°	6	4.3	4.8	5.6	5.6	5.2
40°	6	3.9	4.0	4.4	4.3	5.6

APPENDIX D

In order to assess the reliability of the scales used, Crombach's coefficient alpha was computed for each scale. These are listed in Table 4 below.

TABLE 4

Reliability Coefficients for the Seven Scales

Scale	Reliability Coefficients (Cronbach's alpha)
Persuasiveness	.88
Attractiveness	.88
Status	.84
Expertise	.90
Nonverbal Behaviors	.41
Subject's Feelings	.73
Attitudes	.85

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Note 1. Riess, M. An impression management interpretation of aspects of spatial behavior. Unpublished major area paper. University of Florida, 1977.

Note 2. Schlenker, B. R., & Forsyth, D. R. Social identity theory: The effects of incentives on attitude change following counter-attitudinal behavior. Unpublished manuscript. University of Florida, 1977.

BIOGRAPHICAL SKETCH

Marc Riess, the son of Hans and Rosalin Riess, was born on June 22, 1951, in New York City. In June, 1969, he graduated from Oceanside High School on Long Island. Under the direction of Andrew Baum he received the degree of Bachelor of Arts with a major in Psychology from the State University of New York at Stony Brook in May, 1973. He received his Master of Arts in Psychology from the University of Florida in June, 1975, and will receive his Doctor of Philosophy from the same institution in August, 1977. Mr. Riess has learned his chosen discipline of social psychology from his able mentor and friend, Dr. Barry R. Schlenker, at the University of Florida. In addition to pursuing a career in social psychology, Marc plans to live happily ever after once he receives his doctoral degree.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Barry R. Schlenker, Chair
Associate Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Marvin E. Shaw
Professor of Psychology

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Ted Landsman
Professor of Psychology

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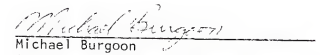

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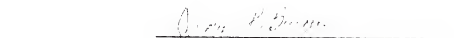

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This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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